DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021501
Date Inspected: 07-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

CWI Present:	☑ Yes	☐ No		**Inspected CWI report:**	☐ Yes	☐ No	☑ N/A	
Rod Oven in Use:	☑ Yes	☐ No	☐ N/A	**Electrode to specification:**	☑ Yes	☐ No	☐ N/A	
Weld Procedures Followed:	☑ Yes	☐ No	☐ N/A	**Qualified Welders:**	☑ Yes	☐ No	☐ N/A	
Verified Joint Fit-up:	☐ Yes	☑ No	☐ N/A	**Approved Drawings:**	☑ Yes	☐ No	☐ N/A	
Approved WPS:	☑ Yes	☐ No	☐ N/A					
Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A					

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12AE (Chevron's)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron, Upper Chevron and H-Beam connecting the floor beam and splice plate at Panel Points (PP) 109, PP 110, PP111 and PP 112 for Segment 12AE at Bike Path side and Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00622 Dated March 07, 2011.

Bolt sizes used were M22 x 70 RC Set# DHGM220041 and final torque required was 460 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220094 and final torque required was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Please reference the pictures attached for more comprehensive details.

Segment 12BW (Chevron's)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron, Upper Chevron, X3D Bracket connected to floor beam flange and to the splice plate and H-Beam connecting the floor beam and splice plate at Panel Points (PP) 113 and PP 114 for Segment 12BW at Counter Weight and Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00621 Dated March 07, 2011.

Bolt sizes used were M22 x 65 RC Set# DHGM220105 and final torque required was 690 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220041 and final torque required was 460 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220094 and final torque required was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Please reference the pictures attached for more comprehensive details.

Segment 12CW (Chevron's)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron, Upper Chevron, X3D Bracket connected to floor beam flange and to the splice plate and H-Beam connecting the floor beam and splice plate at Panel Point (PP) 115 for Segment 12CW at Counter Weight and Cross Beam side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00621 Dated March 07, 2011.

Bolt sizes used were M22 x 65 RC Set# DHGM220105 and final torque required was 690 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220041 and final torque required was 460 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220094 and final torque required was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-776.

Please reference the pictures attached for more comprehensive details.

Segment 12BE to Segment 12CE (Transverse Splice T-Ribs)

This QA Inspector performed Dimension Control Inspection for the Transverse Splice T-Ribs to T-Ribs for the Segment 12BE to Segment 12CE between Panel Point (PP) 114 to PP 115 at the following locations:

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side) total 19 T-Ribs.

Work Point E3 towards Work Point E4 (Bottom Panel) total 18 T-Ribs.

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Bike Path at Bay # 19

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path are identified as:

BK004B-001.

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld.

Observed flatness within the allowable tolerance.

The result of the inspection was informed to ZPMC QC Supervisor Mr. Xu Tao and Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Traveler Rails at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 3005-TR3 for the following measurements against the Inspection Notification 08473.

Traveler Rails Flange curl at typical section after Heat Straightening and observed the dimension within the tolerance informed the same to ZPMC QC Mr. Yin Chun Fang, ABF QA Mr. Yang Yu Heng and Lead Inspector Mr. Mark Miller and Hiranch Patel.

Segment 12BW (Full Height Diaphragm)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a

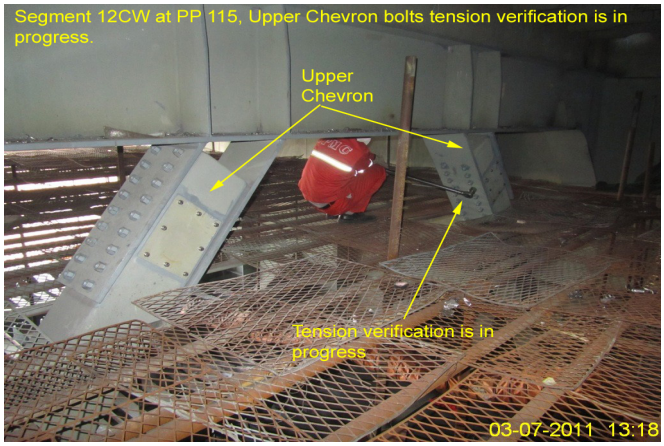
Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3056-001-021. The welder identification was 046709 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as full height Longitudinal Diaphragm web to Deck Panel hold back weld at work point W3.

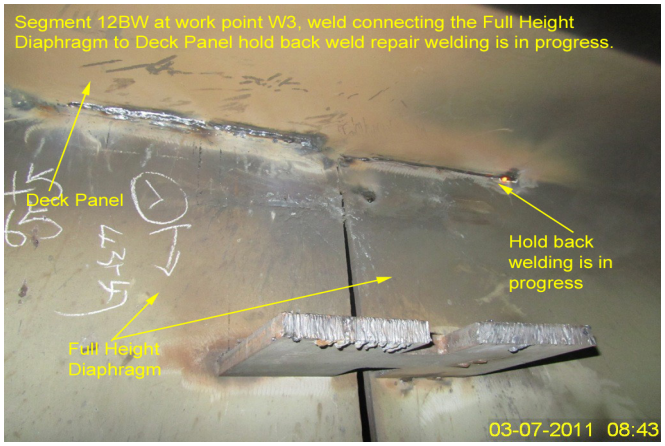
Please reference the pictures attached for more comprehensive details.

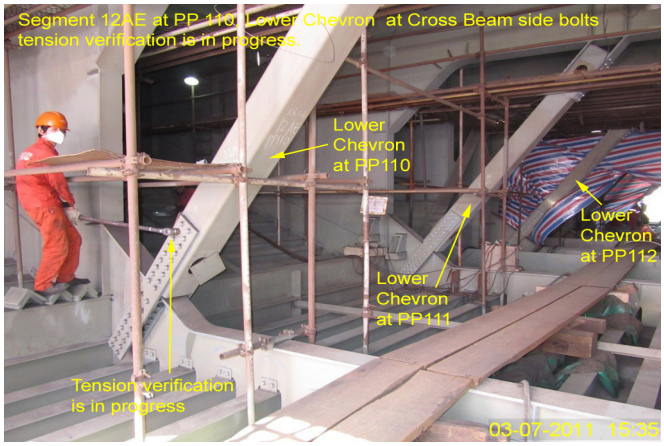
Segment 12CW (Full Height Diaphragm)

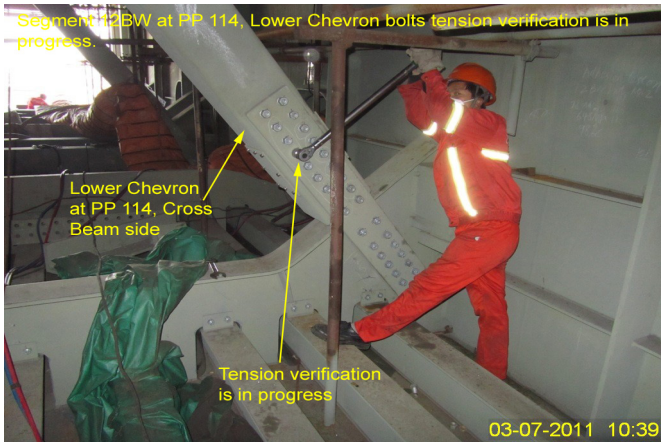
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3067-001-009. The welder identification was 046709 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as full height Longitudinal Diaphragm web to Deck Panel hold back weld at work point W3.

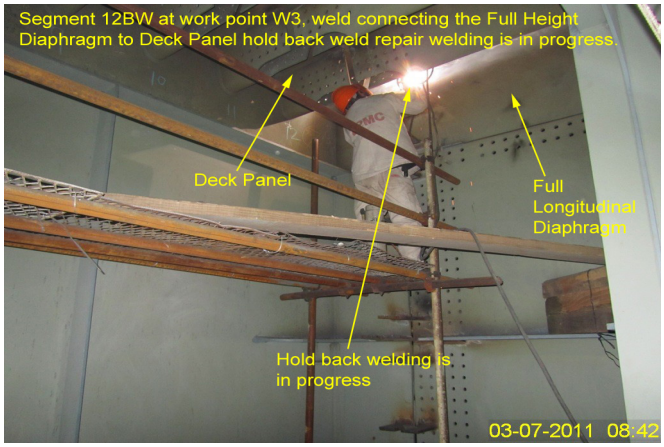
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.











Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer